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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO.       |
|--|-------------|----------------------|-----------------------------|------------------------|
| 10/533,849   | 10/24/2005  | Hiroshi Fukui        | 71,051-007                  | 7869                   |
| 27305  | 7590        | 05/07/2008           |                             |                        |
| HOWARD & HOWARD ATTORNEYS, P.C.<br>THE PINEHURST OFFICE CENTER, SUITE #101<br>39400 WOODWARD AVENUE<br>BLOOMFIELD HILLS, MI 48304-5151 |             |                      | EXAMINER<br>LOEWE, ROBERT S |                        |
|  |             |                      | ART UNIT<br>1796            | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>05/07/2008     | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/533,849

**Applicant(s)**

FUKUI, HIROSHI

**Examiner**

ROBERT LOEWE

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicant's arguments/remarks, filed on 4/29/08, have been fully acknowledged. The instant application has been transferred from Examiner Matochik to Examiner Loewe.

#### ***International Search Report***

EP-1101798, cited on the international search report as an "X" reference, was not relied upon since it does not anticipate, nor render obvious, Applicants instant claims. Specifically, this reference does not anticipate either components (A1) or (A3) of instant claim 1.

#### ***Claim Interpretation***

The limitation of instant claim 1 that the heat conductive filler be surface treated with the silicone oil can be reasonably interpreted by a person having ordinary skill in the art as any composition wherein a silicone oil satisfying the limitations of (A1) and/or (A3) is present along with an untreated heat conductive filler. The presence of said silicone oil and said untreated heat conductive filler results in the interaction of the oil and filler in such a manner as to allow for surface treatment/modification to take place. The presence of other ingredients in the composition does not preclude such a surface-treatment from taking place. There is nothing claimed which requires that the heat conductive filler be **first** reacted/treated with the silicone oil and then the resultant surface treated filler be blended with other ingredients in the composition.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Mine et al. (US Pat. 6,040,362).

Claim 1: Mine et al. teaches a heat conductive polymer composition comprising untreated metal powders (6:64-8:14) and an adhesion promoting agent (5:10-22). Such adhesion promoting agents, such as the one taught at 5:25, satisfies the structural limitations of component (A1) ( $a = 1$ ;  $R^1 = \text{vinyl}$ ;  $R^2 = \text{methyl}$ ;  $m = 0$ ;  $n = 3$ ;  $c = 1$ ;  $d = 3$ ;  $c + d = 4$ ), and the one taught at 5:35, satisfies the structural limitations of component (A3) ( $e = 1$ ;  $R^2 = \text{methyl}$ ;  $n = 3$ ;  $c = 1$ ;  $d = 3$ ;  $c + d = 4$ ). Since the untreated fillers and adhesion promoting agents (which are inherently silicone oils owing to their low molecular weight) are present together in the same composition, it follows that the untreated filler and adhesion promoting agent would interact, resulting in a degree of surface treatment.

Claim 2: Mine et al. further teaches that the heat conductive filler is alumina powder (7:4-5).

Claims 3 and 4: Mine et al. further teaches that the alumina powder is a substantially spherical/quasi spherical powder having a particle size of from 0.1 to 50 microns (7:23-33). Mine et al. further teaches that the alumina powder can be a mixture of approximately 14% (50

parts) of an irregular-shaped alumina powder and 86% of a substantially spherical/quasi spherical alumina powder (Practical example 3 of Table 2).

Claim 5: Mine et al. further teaches that the amount of adhesion promoter/silicone oil falls within the range of instant claim 5. Specifically, Mine et al. teaches that up to 20 parts by weight of adhesion promoter can be present per 100 parts of an organopolysiloxane having at least two alkenyl groups (6:13-22). Further, Mine et al. teaches that the metal powder may be present from 10 to 850 parts by weight per 100 parts by weight of component (A) (7:67-8:14). Therefore, Mine et al. indirectly teaches that the metal powder may be present from 50 to 4250 parts by weight per 100 parts of adhesion promoter/silicone oil, which substantially encompasses the range of instant claim 5.

Claim 6: Mine et al. further teaches that the composition further comprises an organopolysiloxane having at least two alkenyl groups which is different than component (A) of instant claim 1, and that reacts with an organohydrogenpolysiloxane via a hydrosilylation reaction (2:5-12).

#### ***Relevant Art Cited***

The prior art made of record and not relied upon but is considered pertinent to applicants disclosure can be found on the attached PTO-892 form.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Loewe whose telephone number is (571) 270-3298. The examiner can normally be reached on Monday through Friday from 5:30 AM to 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./  
Examiner, Art Unit 1796  
30-Apr-08

/Randy Gulakowski/  
Supervisory Patent Examiner, Art Unit 1796